

12-30-04

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Attorney Docket No. 006119.00007)

In the Application of: )  
Scott Johnston, et al )  
Application No. 10/611,458 ) Group Art Unit: 3624  
Filed: July 1, 2003 ) Examiner: Unassigned  
For: DERIVATIVES TRADING METHODS ) Confirmation No. 1628  
THAT USE A VARIABLE ORDER PRICE )  
AND A HEDGE TRANSACTION )

**RESPONSE TO DECISION ON PETITION TO  
MAKE SPECIAL (ACCELERATED EXAMINATION)**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313

In response to the Decision on Petition to Make Special (Accelerated Examination) mailed November 5, 2004, Applicants hereby submit a revised Petition to Make Special. The Petition was dismissed because the petition failed to include an election without traverse, or a statement that application is willing to elect without traverse should a restriction or election be required.

As indicated in the attached petition, if the Office requires a restriction or election, Applicants will make an election without traverse.

The Commissioner is hereby authorized to charge any fee or credit any overpayment to Deposit Account No. 19-0733.

Date: December 29, 2004

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**PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Attorney Docket No. 006119.00007)

**PETITION TO MAKE SPECIAL**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313

Sir:

Applicant respectfully petitions to make the above-cited application special for accelerated examination. The application was filed on July 1, 2003 and has not received any examination by the Examiner. The Patent Office is authorized to charge the required fee for this petition to make special as set forth in 37 CFR 1.17(i) to Account No. 19-0733.

## I. PRE-EXAMINATION SEARCH

The Applicant hired a professional prior art search firm to perform a pre-examination search. A copy of each reference found in the search is attached. United States and foreign patents and published patent applications were searched electronically using the USPTO's on-site EAST patent image and full text system. Emphasis was placed on patents classified in the following class and subclasses:

<b>CLASS 705</b>	<b>DATA PROCESSING: FINANCIAL, BUSINESS PRACTICE, MANAGEMENT, OR COST/PRICE DETERMINATION</b>
<b>Subclass 1</b>	<b>AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS PRACTICE OR MANAGEMENT ARRANGEMENT</b>
<b>Subclass 35</b>	. Finance (e.g., banking, investment or credit)
<b>Subclass 36</b>	. . Portfolio selection, planning or analysis
<b>Subclass 37</b>	. . Trading, matching, or bidding
<b>Subclass 38</b>	. . Credit (risk) processing or loan processing (e.g., mortgage)
<b>Subclass 39</b>	. . Including funds transfer or credit transaction

Electronic text-based searching of non-patent literature was also performed in the Association of Computing Machinery (ACM) Digital Library, General BusinessFile ASAP database, Proquest Databases, and Elsevier ScienceDirect database.

## **II. Present Application**

Aspects of the present invention relate to methods and systems that utilize a variable defined derivative product order price. Derivative products include options on futures contracts, futures contracts that are functions of or relate to other futures contracts, or other financial instruments that have their price related to or derived from an underlying product. The variable defined derivative product order price may be in the form of a model used to price options. When one of the variables of the model changes, an exchange computer system may recalculate the derivative product's price without requiring the trader to transmit additional or different information to the computer system. The derivative product order may also identify one or more corresponding hedge transactions or include information that may be used to identify a hedge transaction. The execution of the derivative product order may be contingent on the availability of a hedge transaction. Alternatively, a best efforts approach may be used to fill a hedge transaction order after the execution of the derivative product order.

Figure 3, which is reproduced below, shows an exemplary variable defined derivative product order that may be transmitted to and processed by an exchange in accordance with embodiments of the invention.

Variable Defined Derivative Product Order 300

302 → Account number: \_\_\_\_\_

304 → Underlying Contract: \_\_\_\_\_

306 → Expiration Month: \_\_\_\_\_

308 → Put or Call: \_\_\_\_\_

310 → Buy or Sell: \_\_\_\_\_

312 → Quantity: \_\_\_\_\_

314 → Strike Price: \_\_\_\_\_

316 → Delta: \_\_\_\_\_

318 → Gamma: \_\_\_\_\_

320 → Vega: \_\_\_\_\_

322 → Hedge Order: \_\_\_\_\_

324 →  Contingent

326 →  Best Efforts

328 → Formula

330 →  Standard ChgUnderlyingPrice\*delta+(1/2(ChgUnderlying\*gamma)^2)

332 →  Custom

334 → Formula: \_\_\_\_\_

336 → Variables: \_\_\_\_\_

Figure 3

### III. DETAILED DISCUSSION OF REFERENCES

The following is a detailed discussion of the references, which identifies with the particularity required by 37 CFR 1.111 (b) and (c), how the claimed subject matter is patentable over the references.

**U.S. Patent No. 5,649,116**

This reference discloses a computer-based system for managing risk among a plurality of accounts, each account having an associated account exposure, has a means for submitting a transaction to a selected account of a plurality of related accounts and a monitoring means, responsive to the submitting means, for determining a combined exposure of the plurality of related accounts associated with the selected account that would result from the submission of a transaction. A means, responsive to the monitoring means, is provided for authorizing the transaction when the combined exposure determined by the monitoring means is less than a first predetermined limit and for denying a submitted transaction when the combined exposure would exceed the first predetermined limit if the transaction were to be authorized. A means is provided for alerting a first officer when the combined exposure determined by the monitoring means would exceed a second predetermined limit if the transaction were to be authorized. A means is also provided for receiving from the first officer an authorization indicia to the authorizing means and for causing, upon the authorizing means receiving the indicia, the authorizing means to authorize a previously denied transaction. Means are also provided to assess charges for the use of daylight overdraft funds.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent No. 5,799,287**

This reference discloses a method and apparatus for determining an optimal replicating portfolio for a given target portfolio involves an initial step wherein a user defines a target portfolio to be replicated, a set of available market instruments from which the replicating portfolio may be

created, a set of future scenarios, a horizon date, and a minimum profit to be attained. A representation of the trade-off between risk and expected profit for some arbitrary replicating portfolio is then determined and used to calculate a maximum risk-adjusted profit. The maximum risk-adjusted profit reflects that level of return that may be achieved with an optimum degree of risk; that is, it reflects that point in the risk/reward trade-off where a marginal cost of risk is equivalent to a marginal benefit attainable by assuming that risk. The method then uses the predefined set of available market instruments to identify a set of transactions that will create a replicating portfolio that will achieve the maximum risk-adjusted profit. The method and apparatus also derives the information required to compute a risk premium for pricing of portfolios in incomplete markets, and performs the computation.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent No. 6,061,662**

This reference discloses a Monte Carlo system and method for the pricing of financial instruments such as derivative securities. A path-integral approach is described that relies upon the probability distribution of the complete histories of an underlying security. A Metropolis algorithm is used to generate samples of a probability distribution of the paths (histories) of the security. Complete information on the derivative security is obtained in a single simulation, including parameter sensitivities. Multiple values of parameters are also obtained in a single simulation. The method is applied in a plurality of systems, including a parallel computing environment and an

online real-time valuation service. The method and system also have the capability of evaluating American options using Monte Carlo methods.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent No. 6,317,727**

This reference discloses a credit monitoring system in an electronic trading system forms a complex check to determine if two particular counterparties will except each other for a particular trade based upon their respective predefined credit preferences. In accordance with an embodiment, credit preferences imputed by each counterparty with regard to the other counterparty are referenced to determine the trade eligibility of either party with respect to the other for a particular financial transaction instrument. Indication of whether a counterparty can enter into the proposed trade is conveyed to the respective trader, preferably using a color coding scheme in which various colors represent the relevant credit status with regard to the viewing trader. The complex check performed by the system may be embodied in a simple yes/no statement, in terms of maturity of a particular financial instrument, or in terms of a risk quotient (i.e., risk equivalent or RQ) initially determined by the system, though modifiable by the trader.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent No. 6,418,419**

This reference discloses an apparatus and method of automatically and anonymously buying and selling positions in fungible properties between subscribers. The specific embodiment described in the disclosure relates to the buying and selling of securities or contracts where the offer to purchase or sell the property may be conditioned upon factors such as the ability to purchase or sell other property or the actual purchase or sale of other property. Specifically, the system described includes methods by which the system will sort and display the information available on each order, methods by which the system will match buy and sell order and attempt to use other markets to effect the execution of transactions without violating conditions set by the subscriber, methods by which the apparatus will execute transaction and report prices to third parties such that the user is satisfied and short sales are reported as prescribed by the rules and regulations of the appropriate regulatory body governing each subscriber in the associated transaction. A communication system is described which allows subscribers to communicate anonymously for the purpose of effecting transactions in such property under such conditions.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent No. 6,622,129**

This reference discloses a method of creating an index of residual values for leased assets such as vehicles, transferring residual value risk, and creating lease securitizations. The index of residual values includes valuation information pertaining to different types of vehicles, different models and submodels of vehicles, different combinations of vehicle options, different vehicle model years, etc.

The residual value index is updated with subsequent valuations of the leased assets and is employed to facilitate the transfer of residual value risk and create lease securitizations via mechanisms such as residual value futures, options, bonds and insurance products.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2001/0056398**

This reference discloses a method and system for delivering foreign exchange risk management advisory solutions to a designated market. For each user, the disclosed system generates an exposure model that is consistent with that user's risk management policy and a budget/pricing determination made in response to user information and external pricing information. The disclosed system may further operate to determine an appropriate measurement of risk and associated hedge alternative for a user, consistent with economic forecasts, and process a request for a hedge instrument from the user. Various hedge instruments may be analyzed and/or obtained through the disclosed system, including spot contracts, forward contracts, option contracts, and money market instruments. The disclosed system further provides extensive training, compliance and sales related features.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2002/0046151**

This reference discloses an interface primarily used in computerized trading processes. In the especially preferred embodiments, the interface comprises a first sub-interface that allows "plug ins" to be dynamically created and/or edited. The plug ins are executed by a logic engine in which uses various inputs and outputs to obtain necessary information, process the order, and execute the order. The interface can additionally comprise a second sub-interface used to track orders, as well as a third sub-interface used to monitor orders.

This reference does not teach or suggest at least a "variable defined derivative product order," a "variable defined order for a derivative product" or a "method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class," as claimed.

**U.S. Patent Publication No. 2002/0049661**

This reference discloses an open-ended apparatus, methods and articles of manufacture for constructing and executing transaction processes and programs. These apparatus, methods and articles of manufacture are primarily used in computerized trading processes. In the especially preferred embodiments, transactional algorithms may be dynamically created and used through "plug ins," which are executed by a logic engine in which uses various inputs and outputs to obtain necessary information, process the order, and execute the order.

This reference does not teach or suggest at least a "variable defined derivative product order," a "variable defined order for a derivative product" or a "method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class," as claimed.

**U.S. Patent Publication No. 2002/0073007**

This reference discloses a system, method, and computer program product for pricing options which involve more than one underlying asset. The method employs a lattice approach by extending current trinomial techniques to higher dimensions, while achieving a maximum economy of nodes. Such economy produces computational advantages in terms of faster execution speed and the utilization of less memory resources. The method values options under a general form (i.e., Brownian motion) where parameters may depend on time and price, and accounts for drift and volatility parameters.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2002/0082967**

This reference discloses an automated trading exchange having integrated quote risk monitoring and quote modification services. An apparatus is implemented using at least one computer, having memory, and a processor. The computer is configured to receive orders and quotes, wherein specified ones of the quotes are contained in a quote group, and have associated trading parameters such as a risk threshold. Not all received quotes are required to have trading parameters as described herein. Preferably, the quote group contains all the quotes, or a subset of quotes, belonging to an individual market-maker for a given class of options contracts, or possibly the quotes of two or more market-makers that have identified themselves as belonging to a group for the purposes of risk monitoring and quote modification. The computer typically generates a trade by matching the received orders and quotes to previously received orders and quotes, and otherwise

stores each of the received orders and quotes if a trade is not generated. The computer then determines whether a quote within the quote group has been filled as a result of the generated trade, and if so, determines a risk level and an aggregate risk level associated with said trade. The computer then compares the aggregate risk level with the market-maker's risk threshold, and if the threshold is exceeded, automatically modifies at least one of the remaining quotes in the quote group. The computer may also automatically regenerate quotes that have been filled.

This reference does not teach or suggest at least a "variable defined derivative product order," a "variable defined order for a derivative product" or a "method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class," as claimed.

**U.S. Patent Publication No. 2002/0099651**

This reference discloses a credit monitoring system in an electronic trading system forms a complex check to determine if two particular counterparties will except each other for a particular trade based upon their respective predefined credit preferences. In accordance with an embodiment, credit preferences imputed by each counterparty with regard to the other counterparty are referenced to determine the trade eligibility of either party with respect to the other for a particular financial transaction instrument. Indication of whether a counterparty can enter into the proposed trade is conveyed to the respective trader, preferably using a color coding scheme in which various colors represent the relevant credit status with regard to the viewing trader. The complex check performed by the system may be embodied in a simple yes/no statement, in terms of maturity of a particular financial instrument, or in terms of a risk quotient (i.e., risk equivalent or RQ) initially determined by the system, though modifiable by the trader.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2002/0120542**

This reference discloses a method and system for hedging a correlation risk associated with a basket option that includes a plurality of securities that includes the step of selecting at least two of the plurality of securities and, in the next step, forming a best-of option for the at least two of the plurality of securities. Finally, the best-of option is combined with the basket option to hedge the correlation risk associated with the basket option.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2002/0174056**

This reference discloses a system for providing options trading data. The system includes an options data system storing options data, such as options that are presently available to be bought or sold in an options marketplace. The system also includes a user profile system that stores user profile data, such as data that indicates the user's aversion to risk. An options selection system connected to the user profile system and the options data system generates options trading data, such as by selecting options that are presently available based on the user's aversion to risk. In this manner, a user with limited options trading experience can be provided with options trade suggestions that match the user's risk preferences.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No.2003/0009419**

This reference discloses a system for processing trade data and market data to produce risk management reports and delivering reports, simultaneously, to multiple related and unrelated users over a distributed network. In one aspect of the invention, the risk management analysis includes the assessment of risk through mark-to-market, profit and loss, "greek", FAS 133, and related reports. Further, market and trade data may be collected electronically from exchanges, information service providers, and other sources to be aggregated for use in the risk management analysis

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2003/0033240**

This reference discloses a computer implemented method for negotiating contracts between a plurality of participants. An order is received from a first participant of the plurality of participants. Position risk of the first participant is calculated by accessing data regarding the first participant and using the data regarding the first participant in a parametric variable equation modified by control values from a simulation model, to calculate the position risk of the first member. The order is blocked, if the position risk of the first participant is in a first condition for the first participant. The

order is made available for forming into a contract, if the position risk of the first participant is in a second condition for the first participant.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2003/0046218**

This reference discloses novel options-based financial instruments, and a related system and method that automates market trading of the novel instruments. The invention protects positions against short-term market movements by inducing users on the opposite sides of a transaction to trade in equal or near equal dollar volumes. The system includes an automated price quotation capability for the instruments, that operates at computer speeds, without human intervention-- specialists and market makers are not necessary. Through the use of feedback techniques, the system induces traders on the opposite sides of a transaction to trade in near equal numbers of round lots, minimizing the system's financial exposure from unbalanced trading. The system also fully automates the trading of the financial instruments themselves, plus the attendant functions (inventory control, billing, reporting, etc.), so that users may interact with the system on-line, without human intervention. The novel financial instruments have the characteristic that they allow trading directly in the price movement of the underlying security (stock, bond, currency, etc.), while providing superior financial leverage as compared to investing directly in the underlying security.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2003/0069821**

This reference discloses a risk management system for use in generating, for any long or short stock position or an entire portfolio, one or more options hedging strategies to protect unrealized profits and to insure the position against directional market risk. The risk management system recommends a preferred options hedging strategy out of many possible strategies based on minimizing losses while maintaining profits, but users of the system can review other possible strategies and make their own selection using predetermined reward, cost, and risk goals. In addition, user's can modify the predetermined goals in a real-time mode and assess alternate options hedging strategies. The risk management system also monitors existing investor profiles and alerts the user when a hedging action is recommended based on pre-established parameters customized for a particular stock position or an entire portfolio. The system accomplishes these features, and others, through an easily learned, fast and efficient user interface.

This reference does not teach or suggest at least a "variable defined derivative product order," a "variable defined order for a derivative product" or a "method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class," as claimed.

**U.S. Patent Publication No. 2003/0074167**

This reference discloses a method and system for simulating changes in volatility for a price of a particular option on an underlying financial instrument. A volatility surface model having at least one surface parameter is provided along with a set of volatilities for a plurality of options on the underlying financial instrument. The set of volatilities is analyzed to determine an initial value for each surface parameter which, when used in the surface model, defines a surface approximating

the set of volatilities. The values of the surface parameters are then evolved using an appropriate evolution function. A volatility value for a particular option is extracted from the volatility surface defined by the evolved surface parameter values. The extracted volatility value can then be used in an option pricing model to provide a price of the particular option. The volatility of a basket options valued relative to the performance of multiple components can be simulated by determining the value of surface parameters for options on the component securities and then combining the component surface parameters to determine surface parameters for a volatility surface of the basket.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2003/0093347**

This reference discloses a software application program, executed by a processor of a digital data processing device, to analyze and model economic/financial risk associated with sovereigns, financial sectors, non-financial sectors, and/or investment portfolios. The disclosed technology can calculate and assess, for example, contingent claim values, asset values, volatilities, default barriers, and monetary parameters from financial and macroeconomic data associated with government and monetary authorities and can use such calculations to calibrate risk models and generate economic balance sheets for an economy useful in valuation, risk and vulnerability analysis, risk mitigation, design of investment strategies, and policy analysis and design.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2003/0097328**

This reference discloses in an automated exchange system a separate virtual derivative instrument used in the matching process of the system. The reference instrument, i.e. the instrument in which derivative contracts are traded, is then preferably displayed together with the hedged derivative instruments. The reference instrument, i.e. the underlying contract, is presented with a price. The matching of the virtual hedged derivative contract can take place in a matching module of the automated exchange system. The trade can subsequently be captured in a separate module of the system where the combined deal is formed. When a trade in a virtual hedged derivative instrument is matched in the matching process of the system, the match is reported to a subsequent deal capture module where the corresponding different deals of the virtual hedged derivative contract the reference instrument are formed. The deals formed in the deal capture module do not need to be matched, since the number of contracts and the price can be deduced from the information relating to the virtual hedged derivative contract.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2003/0101123**

This reference discloses a system, method, software, and portfolios for managing risk in markets relating to a commodity delivered over a network are described, in which a market participant constructs portfolios of preferably liquid price risk instruments in proportions that eliminate the Spatial Price Risk for the market participant's underlying position. Techniques are also disclosed for constructing and evaluating new price risk instruments and other sets of positions, as

well as identifying arbitrage opportunities in those markets. In particular, a "deltas vector" is calculated concerning a portfolio of future positions and derivative contracts, wherein the "deltas vector" is the partial derivative of the market participant's net market position taken with respect to the forward shadow prices  $\lambda$  of the network which depend upon congestion in the network. The "deltas vector" can then be used to simplify the valuation of a derivative contract, develop a hedging strategy, evaluate a hedging strategy with respect to congestion, identify a successful bidding strategy at auctions of derivative contracts, and determine an optimal position in a multi-settlement nodal market. Moreover, techniques are also described for evaluating the matrix of Power Transfer Distribution Factors and loss factors (comprising the A matrix) that are needed to estimate the "deltas vector".

This reference does not teach or suggest at least a "variable defined derivative product order," a "variable defined order for a derivative product" or a "method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class," as claimed.

**U.S. Patent Publication No. 2003/0101125**

This reference discloses a derivative security whose value is determined by whether an underlying instrument will trade above or below a given price at or by a given time. The price of the underlying instrument in the inventive instrument must move a certain amount in a certain direction in a limited amount of time. If it does, that trade yields a fixed amount of money for the acceptor of the contract. If it does not, that acceptor loses the premium lie paid for the contract.

This reference does not teach or suggest at least a "variable defined derivative product order," a "variable defined order for a derivative product" or a "method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class," as claimed.

**U.S. Patent Publication No. 2003/0208430**

This reference discloses a method for providing a bid price and/or an offer price of an option relating to an underlying asset, the method including the steps of receiving first input data corresponding to a plurality of parameters defining the option, receiving second input data corresponding to a plurality of current market conditions relating to the underlying value, computing a corrected theoretical value of the option based on the first and second input data, computing a bid/offer spread of the option based on the first and input data, computing a bid price and/or an offer price of the option based on the corrected theoretical value and the bid/offer spread, and providing an output corresponding to the bid price and/or the offer price of the option.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2003/0225648**

This reference discloses a method of applying a substantially constant leverage to a value of a log-normal distributed asset includes providing an underlying log-normal distributed asset having an original volatility  $\sigma$  and an original yield  $q$ . The asset includes an associated value  $S$  denominated in a currency having an associated interest rate  $r$ . The method and system also include applying a leveraging factor  $L$  to produce a modified value, volatility and/or a modified yield.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2003/0233308**

This reference discloses an automated exchange system, a single matching unit is supplemented with a calculation unit and a global memory accessible by both the calculation unit and the matching unit. Such a computer architecture will make it possible to perform some of the calculations related to the volume and/or prices of the baits needed in the matching to be performed in advance. The matching process is able to use the values resulting from the pre-calculation when needed, and since no or few calculations are done in one of the most critical parts of the system, i.e. the matching unit, the process of matching combination contracts can be performed at a much higher rate. Hereby the performance of the matching process will be significantly increased. The provision of one or several calculation units will make it possible to perform even very complex calculations can be performed since most calculations need not be performed in real time.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2004/0044613**

This reference discloses for a comprehensive risk evaluation of the electricity price fluctuations, respective relationships between power supplies or power demands and electricity prices are derived from data of historical power supply or power demand and data of historical electricity price for respective power exchanges, respective probability distributions of electricity price fluctuations relating to uncertain fluctuations of the power supply or the power demand are computed by using the respective relationships in a given period for evaluation of a market risk, the market risk of electricity price is measured by using the respective probability distributions of

electricity price fluctuations, a probability distribution for randomly fluctuating components is derived by Monte Carlo simulation, and a market risk to the electricity price fluctuations is evaluated.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2004/0064393**

This reference discloses a computer-implemented method is provided for valuing and hedging payoffs that are determined by an underlying non-marketed variable that moves randomly. The value assigned is that which is obtained by projecting the instantaneous return of the future payoff onto the span of marketed assets. An explicit method is provided for determining this value by determining a suitable market representative. In a continuous-time embodiment, the methodology is based on an extended Black-Scholes equation that accounts for the correlation between the underlying non-tradable asset and marketed assets. Once this extended equation is solved, the value of the payoff, the optimal hedging strategy, and the residual risk of the optimal hedge can be determined. In alternate embodiments, the same value is determined as the discounted expected value of the payoff, using risk-neutral probabilities for the non-marketed variable. These risk-neutral probabilities are again determined by the relation of the underlying variable to the payoff of a most-correlated marketed asset. The risk-neutral version of the method applies in both continuous-time and discrete-time frameworks, providing asset valuation, optimal hedging, and evaluation of the minimum residual risk after hedging.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2004/0083158**

This reference discloses methods and systems for providing network-based trading platforms with a continuous stream of up-to-date pricing date for derivatives by way of an externally based pricing-engine system. The pricing engine receives and process feeds of up-to-date information to derive up-to-date pricing data for complex derivative securities. Preferably, the up-to-date information feed is received in real time from a network-based source. The methods and systems of the invention then write the derived pricing data to the locations in cache memory of a network-based trading platform where pricing data is read.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**U.S. Patent Publication No. 2004/0083165**

This reference discloses systems, methods, apparatus, computer program code and means for gathering, organizing and presenting on a real time basis information pertinent to Risks associated with subjects related to the Construction Industry. Risks associated with the Construction Industry can be managed by gathering data relevant to the Construction Industry from multiple sources and aggregating the gathered data according to one or more Risk variables. An inquiry relating to a Risk subject can be received and portions of the aggregated data can be associated with the Risk subject.

The associated portions of the aggregated data can be transmitted to an entity placing the inquiry or other designated destination.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**Ritchie, Joseph; “Why Market Maker Position Limits Should Be Delta-Based”; *Futures*, Vol. 17, No. 9, PP. 42(2), August 1988; UMI Publication No.: 00415047**

This reference indicates that a key economic function of position limits in markets should be prevention of excessive amounts of risk among participants who are not prepared to manage that risk. A method is proposed in which risk is delta neutral and "gamma balanced."

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**Meyer, Thomas O.; “Calculation and comparison of delta-neutral and multiple-Greek dynamic hedge returns inclusive of market frictions”; *Department of Commerce, International Review of Economics and Finance*; 12 (2003); pp. 207–235**

This reference describes research in which a model is developed that calculates position returns for both delta-neutral and multiple-Greek hedging effectiveness and incorporates Standard Portfolio Analysis of Risk (SPAN) margin requirements (MRs) as well as transaction costs (TCs).

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**Temple, Peter, et al; *World Reporter* (TM); Investors Chronicle; 11 December 1998; Copyright (C) 1998 Investors Chronicle; P. 62**

This reference describes software that helps traders price options. A pricing model can determine implied volatility and various measures of sensitivity. Charting packages are also described.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**Holter, James T.; “It’s Liquidity Stupid, CBOE Ups S & P Limits; [www.futuresmag.com](http://www.futuresmag.com); November, 1996**

This reference describes how the Securities and Exchange Commission (SEC) approved treating synthetic stock instruments, such as collars, as one instrument for hedge purposes. The SEC also approved increasing exercise and position limits as well as hedge exemptions at the CBOE.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**Kawaller, Ira G; “A novel approach to transactions-based currency exposure management”; *Financial Analysts Journal*; Nov/Dec 1992; 48, 6; pg. 79**

This reference discloses an approach to transactions-based currency exposure management. The reference indicates that by buying options, where the consolidated delta of the position equals the alternative futures hedge ratio, the hedger may be able to generate results superior to those of the traditional futures hedge in both rising and falling price environments.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

**“S&P ComStock/Micro Hedge Windows: results rooted in reliability.”; *Futures (Cedar Falls, Iowa)*; Annual 1993 v22 n7 p26(1); COPYRIGHT Oster Communications Inc. 1993**

This reference describes a fully networkable options analysis and risk management software product from May Consulting and S&P ComStock. The software allegedly allows continuous assessment of opportunities while minimizing risks, particularly when market prices are fluctuating. The reference indicates that Micro Hedge Windows offer theoretical values, delta, gamma, theta, four valuation models, implied volatility, volatility distribution, dynamic skew, trading sheets, sensitive variable analysis, profit/loss matrix and plot and derivatives.

This reference does not teach or suggest at least a “variable defined derivative product order,” a “variable defined order for a derivative product” or a “method of synthetically matching unresolved hedge transaction orders for orders belonging to a common class,” as claimed.

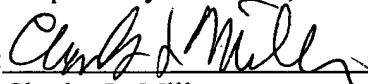
**IV. ELECTION WITHOUT TRAVERSE**

In accordance with MPEP § 708.02 VIII, if the Office determines that all of the claims are not directed to a single invention, the Applicant will make an election without traverse.

**Conclusion**

The Applicants respectfully submit that the instant application is in condition for allowance. Should the Examiner believe that a conversation with Applicant's representative would be useful in the prosecution of this case, the Examiner is invited and encouraged to call Applicant's representative.

Date: December 29, 2004

Respectfully submitted,  
By:   
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CERTIFICATE OF EXPRESS MAIL  
(PATENT)

Attorney Docket No. 006119.00007

Express Mail No. EL 995822635 US  
Deposited December 29, 2004

I hereby certify that the attached correspondence, identified below, is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee" under 37 CFR §1.10 on the date indicated above and is addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, ATTN: Technology Center 3600.

By: \_\_\_\_\_

Johnston, et al., U.S. Patent Application No. 10/611,458 for "Derivatives Trading Methods That Use a Variable Order Price and a Hedge Transaction"

- Transmittal Form
- Response to Decision on Petition to Make Special (1 page)
- Petition to Make Special (26 pages)
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**TRANSMITTAL  
FORM***(to be used for all correspondence after initial filing)*

Total Number of Pages in This Submission

Application Number 10/611,458

Filing Date July 1, 2003

First Named Inventor Johnston

Art Unit 3624

Examiner Name Unassigned

Total Number of Pages in This Submission

Attorney Docket Number 006119.00007

**ENCLOSURES (check all that apply)**

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input checked="" type="checkbox"/> Petition to Make Special <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Response to Decision on Petition Return Receipt Postcard
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**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm	Banner & Witcoff, LTD.		
Signature			
Printed Name	Charles L. Miller		
Date	December 29, 2004	Reg. No.	43,805

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

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